



## Models 2501 and 2511

### Preliminary

## OEM Pressure Switch Absolute PC Board Mountable Low Cost

### Features

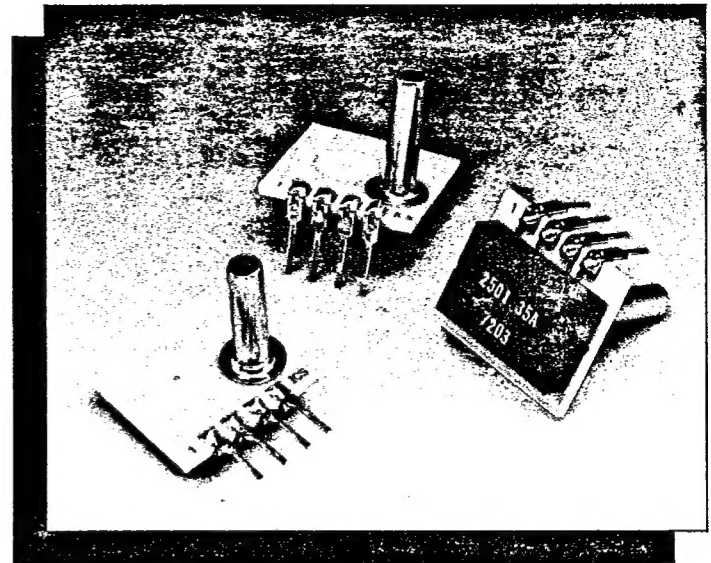
- Solid State Reliability
- Factory Set Switchpoint
- Simplified Electrical Interface
- Temperature Independent
- Vibration Insensitive
- Internal Reference Chamber
- Normally Open or Normally Closed
- Miniature Size

### Typical Applications

- Medical Instruments
- Automotive
- Industrial Controls
- Factory Automation
- Pressure Limits and Alarms
- Aerospace
- Leak Detection
- Clogged Filter Detection

### Standard Ranges

20 psia	50 psia	80 psia
25 psia	55 psia	85 psia
30 psia	60 psia	90 psia
35 psia	65 psia	95 psia
40 psia	70 psia	100 psia
45 psia	75 psia	



### Description

The Model 2501 is an absolute pressure switch packaged in a single-in-line (SIP) configuration that exhibits a transition from open to closed as pressure passes through the setpoint.

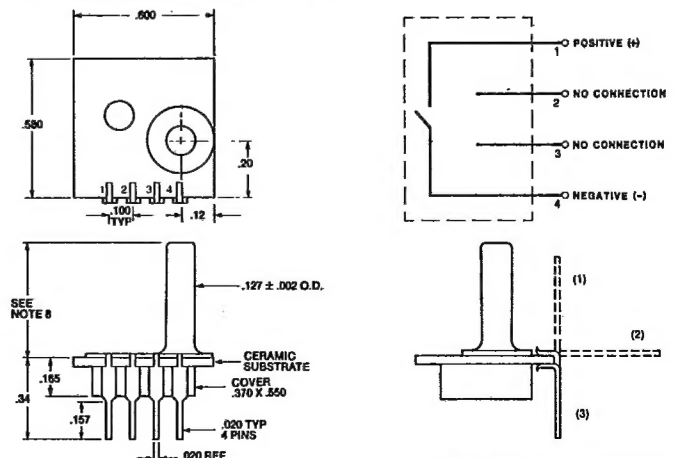
The Model 2511 is capable of switching a larger load and is available in either a normally open or normally closed configuration.

The ON/OFF output eliminates the need for comparators, potentiometers, and other circuitry required when using a pressure sensor for switching applications.

The switch element incorporates a micromachined silicon diaphragm and an internal, hermetically sealed vacuum reference chamber for stable absolute measurement. The device's unique structure gives it ultralow temperature dependence, long switch life, and virtually no drift. The switchpoint requires no adjustment in the field because it is accurately set at the factory.

Both models are available in absolute pressure setpoints ranging from 20 psia to 100 psia. Various lead and tube configurations are available for adapting the package to a variety of applications.

### Connections/Dimensions



ALL DIMENSIONS IN INCHES

(1),(2),(3)-LEAD CONFIGURATION  
SEE NOTE 9

**Model 2501 and 2511**

T-65-13

**Performance Specifications**

Ambient Temperature = 25°C (Unless otherwise specified)

PARAMETER	Model 2501			Model 2511			UNITS	NOTES
	MIN	TYP	MAX	MIN	TYP	MAX		
Operating Pressure Range	0		120	0		120	psia	
Setpoint Range (Factory Set)	20		100	20		100	psia	1,2,3
Setpoint Tolerance		3			3		±% setpoint	
Repeatability		3			3		±% setpoint	4
Deadband		0.35			0.35		±psia	5
Pressure Overload			5X			5X	Rated	6
Temperature Effect on Setpoint		0.03			0.03		psia/°C	7
Acceleration Effect on Setpoint		0.001			0.001		psia/g	
Response Time		1			1		msec	
Operating Voltage	-2.5	±0.5	2.5	0.8	5	45	VDC	8
Switching Current		0.1	0.1		10	200	mA	8
Maximum Power			0.1			500	mW	8
ON Resistance		1000			5		Ω	
OFF Resistance	0.1	1			0.5	2.5	MΩ	9
Voltage Drop					0.7	1.9	VDC	10
Current Consumption (OFF)					10		μA	
Operating Temperature	-40		+125	-40		+85	°C	
Storage Temperature	-55		+150	-55		+150	°C	
Weight		2			3		Grams	

**Notes**

- For the Model 2501, setpoint is defined as the point at which the switch resistance = 1kΩ.
- Other setpoints are available on a special order basis.
- Absolute pressure is referenced to vacuum.
- Repeatability is defined as the change in setpoint over 50,000 pressure cycles.
- Deadband is defined as the difference in setpoint for increasing and decreasing pressure.
- 5X nominal setpoint or 200 psia, whichever is less.
- Temperature effect over the entire operating temperature range.
- Power across contacts (Power = Voltage x Current) cannot exceed stated maximum.
- For the Model 2511: 0.5 MΩ corresponds to 5V operating voltage; 2.5 MΩ corresponds to 45V operating voltage.
- For the Model 2511: 0.7V corresponds to 10mA operating current; 1.9V corresponds to 200 mA operating current.
- Normally closed devices are designated with a mark on the lower right corner of the lid.
- Tube length: L = 470 ±5 mil, S = 300 ±3 mil, N = no tube.
- Lead pins can be in one of three directions. See drawing on front page for lead configurations.

**Ordering Information**

2511 - 050A - 3 L - NO

- Switch Type (NO or NC - see note 11)  
 Pressure Tube (L, S, N - see note 12)  
 Lead Configuration (1,2,3 - see note 13)  
 psi Range (Absolute)  
 Model (2501 or 2511)

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M2501R2-8807 Printed in USA